

iQ-Check Purification Reagent

Catalog #	Description
12012383	iQ-Check Purification Reagent , includes 1 vial (2.5 g powder) iQ-Check Purification Reagent and magnetic stir bar

For laboratory use only.

Introduction

Although PCR is a powerful method for the rapid detection and characterization of microorganisms in routine testing, its performance may be affected by inhibiting substances present in certain food matrices. The iQ-Check Purification Reagent integrates seamlessly with iQ-Check DNA extraction workflows, providing an effective and simple way to purify enriched food and environmental samples.

Principle

The removal of inhibiting substances is accomplished by a polymer-mediated treatment that targets and absorbs polyphenols typically known to cause PCR inhibition. Unlike more cumbersome and labor-intensive purification options, such as immunomagnetic separation or silica-based purification, the iQ-Check Purification Reagent can simply be added directly to DNA extracts.

Kit Components

The iQ-Check Purification Reagent contains sufficient reagents for 96 tests.

Reference	Reagent ID	Quantity Provided
H	iQ-Check Purification Reagent	1 vial, 2.5 g powder with 1 magnetic stir bar

Shelf Life and Storage

Once received, the iQ-Check Purification Reagent can be stored at ambient temperature. An unopened vial can be used until the expiration date indicated on the labels.

The shelf life of the activated solution (rehydrated with 25 ml of sterile distilled water) is 1 month at 2–8°C. Before using, allow the vial to come to room temperature. Gently mix the solution by vortexing or inverting the vial to homogenize before use.

Required Materials Not Supplied

This is a nonexhaustive list.

Equipment

- 1,000 µl micropipet
- Thermoshaker capable of maintaining 37 ± 2°C (contact your Bio-Rad sales representative for ordering information)
- Magnetic stir plate

Supplies

- Sterile distilled or Milli-Q water
- Sterile filter tips, adaptable to 1,000 µl
- For purification in deep-well plates:
 - 1 ml deep-well microplate (for example, #3594900)
 - X-Pierce Film (#3593977) (#3600040 in North America)
- Powder-free gloves
- Decontaminating agent, such as DNA AWAY or RNase AWAY

Visit bio-rad.com/iqcheck for a complete list of iQ-Check Food Kits.

Precautions

Precautions and recommendations for best results:

- This protocol must be performed by adequately trained personnel
- All potentially infectious material should be autoclaved before disposal
- The quality of results depends on strict compliance with the following Good Laboratory Practices, especially concerning PCR:
 - The laboratory equipment (such as pipets and tubes) must not circulate from one workstation to another

- It is essential to use a positive control and a negative control for each series of amplification reactions
- Do not use reagents after their expiration date
- Periodically verify the accuracy and precision of pipets and the correct functioning of the instruments
- Change gloves often, especially if you suspect they are contaminated
- Clean work spaces periodically with at least 5% bleach and a decontaminating agent like DNA AWAY
- Use powder-free gloves
- It is strongly advised to follow the general requirements described in the standard EN ISO 22174:2005, “Microbiology of food and animal feeding stuffs — Polymerase chain reaction (PCR) for the detection of food-borne pathogens — General requirements and definitions”

See the safety data sheet at bio-rad.com/foodscience for product safety information.

Validations and Tested Applications

This protocol has been successfully tested on cannabis-infused products (including edibles, solvents, and non-solvent extracts), cocoa powder, chocolate samples (and subcomponents), dried spices and herbs, and ground coffee and tea samples. Contact your Bio-Rad sales representative for more information.

Protocol

Please read the entire protocol before starting the assay.

A. Sample Enrichment

Follow the instructions for each iQ-Check Kit.

B. iQ-Check Purification Reagent Treatment

Suspension of the iQ-Check Purification Reagent

Reagent H can be used until the expiration date indicated on the vial.

- Suspend Reagent H by adding 25 ml of sterile distilled or Milli-Q water. Gently mix by inverting the vial
- Keep Reagent H in suspension while pipetting by stirring at medium speed on a magnetic stir plate

The solution is now homogeneously suspended and ready to use. You will need 20 ml of the suspended Reagent H to perform 96 tests using the Standard or Easy DNA Extraction Protocol (200 µl reagent/50 µl DNA extract).

Treatment with the iQ-Check Purification Reagent

- Add 50 µl of DNA extract to an empty deep-well microplate or tube
- Add 200 µl of suspended Reagent H to the DNA extract
- Using a 1,000 µl micropipet, mix by gently pipetting up and down 5 times to ensure thorough homogenization
- Alternatively, the deep-well plate can be sealed with pre-pierced sealing film and mixed on a thermoshaker at 1,300 rpm for 5 sec without heating
- After mixing, allow the solution to settle for a minimum of 5 min. Do not allow the solution to stand for more than 1 hr
- Proceed to PCR reaction setup by adding 5 µl of the purified DNA extract to each well of a PCR microplate containing the PCR mix. **Do not vortex before collecting the samples**

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